

## RESPONSE TO COMMENTS

The Willits Environmental Remediation Trust (WERT) has proposed three projects to remediate soil and groundwater contamination at the Remco Plant in Willits. The projects include the Chromium Interim Remedial Action (IRA), Volatile Organic Compound (VOC) pilot study, and excavation and off-site disposal of contaminated soil. The IRA and VOC Pilot Study are proposed to be regulated under waste discharge requirements. The Regional Water Board is scheduled to consider adoption of waste discharge requirements for these projects on September 24, 2003. The soil excavation does not require the consideration of waste discharge requirements by the Regional Water Board because there is no discharge of waste that could affect waters of the State. On July 24, 2003, Regional Water Board staff presented draft waste discharge requirements and an Initial Study/Negative Declaration for the Chrome IRA at a public meeting in Willits. Comments from the public and interested agencies have been received in response to:

- The WERT's workplan and addendum titled *Interim Remedial Action Workplan for Hexavalent Chromium-Affected Groundwater* dated March 11, 2003; and *Addendum to Interim Remedial Action Workplan for Chromium-Affected Groundwater* dated June 19, 2003, August 20, 2003, August 22, 2003, August 28, 2003, and September 3, 2003;
- The WERT's workplan and addendum titled *Work Plan for VOC Area #2 Pilot Study Program* dated March 6, 2003, and *Addendum to Work Plan for VOC Area #2 Pilot Study Program*, dated June 18, 2003, August 22, 2003, August 28, 2003, and September 3, 2003;
- Draft waste discharge requirements; Initial Study/Negative Declaration.

This document responds to those comments that pertain to the draft waste discharge requirements, and Initial Study/ Negative Declaration.

This *Response To Comments* includes letters received by the Regional Water Board staff up to the date of September 5, 2003. The public comment period for this item ends on September 9, 2003.

### Comments Received

The issues raised will be listed as a "Comment", and staff's "Response" will follow.

**Comment No. 1:** Letter from K. Berry dated July 3, 2003, refers to a workplan titled *Work Plan for Remediation of Source Soils*, and provides a discussion of the California Environmental Quality Act (CEQA).

**Response No. 1:** Mr. Berry's letter, first three paragraphs, addresses a separate proposal by the Willits Environmental Remediation Trust that is not a part of the actions before the Regional Water Board on September 24, 2003. The commenter is referring to the *Work*

*Plan for Remediation of Source Soils.* Specific comments on that project will not be addressed in the response to comments as it is for an excavation of contaminated soils that is not the subject of the action before the Regional Water Board. However, the CEQA issues raised are applicable to the actions being considered as part of the VOC pilot study, and the chromium interim remedial action. The CEQA issues are discussed below in Response No. 2.

**Comment No. 2:** The commenter provides a lengthy discussion of CEQA, most of which recites views on the general structure and requirements of that statute. The crux of the comment appears to be an assertion that the Regional Water Board should prepare an EIR, specifically a Program EIR, instead of relying on the Negative Declaration recommended by staff.

**Response No. 2:** The rationale for the request is not entirely clear. While the commenter concedes that a Negative Declaration is appropriate where it has resulted from an “objective[.]” analysis of the project’s impacts, the commenter asserts that “informed disagreement” triggers the need to prepare an EIR. Although the commenter acknowledges that the agencies involved in this project “are capable of analyzing the project objectively[.]” it goes on to contend that, in this case, “mistakes have been made by public agencies” and that the Willits Environmental Restoration Trust “and/or its contractors have acted dishonestly.” On balance, it appears that the commenter believes that an EIR is the minimum necessary to ensure an objective disclosure of the project’s impacts.

In fact, the Negative Declaration provides just the type of analysis the commenter is asking for. The Regional Water Board had other options available to it to comply with CEQA for these WDRs. It could, as noted by the commenter, have determined that they were exempt.

There are two reasons why the Regional Water Board could have made this determination. First, the interim remediation project is not proposed by the applicant as a volunteer action, rather a court order set up the WERT and directed that it administer the remediation of the site. Courts are not subject to CEQA and so even though their orders may result in impacts on the environment, those impacts need not be analyzed under CEQA. The WDRs are a regulatory instrument to control activities that are already directed by the court order, so they are potentially exempt from CEQA.

Second, the project is being undertaken to comply with CAO No. 99-55, which mandates cleanup of the contamination on the site. The issuance of a cleanup and abatement order is exempt from CEQA as an enforcement action. (Title 14, California Code of Regulations, Section 15321.) The commenter contends this exemption is inapplicable to the project because “construction” activity is not covered. This is incorrect. The exemption only excludes construction activity “undertaken by the public agency taking the enforcement . . . action . . . .” The project can therefore still be exempt since it is the Regional Water Board--and not the WERT--that took the enforcement action by issuing the CAO. Regardless, the Regional Water Board did not claim that the project is exempt.

Instead, the Regional Water Board staff decided to prepare and circulate a Negative Declaration. Unlike an exemption, a Negative Declaration presents a comprehensive analysis of potential environmental impacts. An initial study must be prepared, which analyzes all of the potential environmental effects of the project and their significance. A Negative Declaration also better informs the public and decision makers because the initial study and proposed Negative Declaration must be prepared and then circulated to the public for a 30-day comment period. Regional Water Board staff therefore prepared the Negative Declaration in hopes of informing the public and decision makers about the consequences of the project.

Perhaps the commenter has concluded that these aims would be even better served by preparing a full EIR. An EIR would certainly contain more information, in particular an analysis of alternatives, however, this is not reason enough to prepare one: “The purpose of CEQA is not to generate paper, but to compel government at all levels to make decisions with environmental consequences in mind.” (*Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 393.)

The commenter’s contentions do not justify preparation of an EIR. Although the commenter mentions the “public concern” over the project and contends that WERT and/or its contractors “have acted dishonestly,” such public controversy does not justify the preparation of an EIR. (See, e.g. *Citizens for Responsible Development v. City of West Hollywood* (1995) 39 Cal.App.4th 490, 500.)

The commenter expresses skepticism on the use of a Negative Declaration: “Usually a Mitigated ND (MND) is used instead of a[] ND because if a project really had no environmental impacts at all, it would probably be in an exempt category.” Whatever basis the commenter has for this assertion is not identified in the comment. The contention is, in fact, incorrect. Exemption categories are narrowly construed (*Santa Monica Chamber of Commerce v. City of Santa Monica* (2002) 101 Cal.App.4th 786, 792) so there are many instances when the characteristics of a project may not be covered by an exemption. In such instances, even if the project would not cause a significant environmental effect, a Negative Declaration would still be required. In this case, regardless of whether an exemption(s) would apply, the Regional Water Board elected to prepare a Negative Declaration.

In summary, while an EIR would undoubtedly be more detailed, it is unnecessary because the WDRs and the underlying project will not have a significant effect on the environment. The appropriate method of complying with CEQA was to either conclude that the project is exempt or prepare a Negative Declaration. The Regional Water Board appropriately chose the latter course.

**Comment No. 3:** The commenter provides a discussion on the lead agency status for the Remco site. The commenter assumes that the Regional Water Board is acting on behalf of the Department of Toxic Substances Control (DTSC) and U.S. EPA.

**Response No. 3:** The action before the Regional Water Board is to issue Waste Discharge Requirements for the chromium interim remedial action. This action requires compliance with CEQA and the Regional Water Board is the lead agency. The Regional Water Board staff coordinates with other agencies as necessary. Both DTSC and U.S. EPA receive copies of Regional Water Board correspondence and orders. The Regional Water Board is using its independent authority to require the investigation and cleanup of the Remco site.

**Comment No. 4:** The Regional Water Board has incorrectly applied CEQA when issuing Cleanup and Abatement Order No. 99-55.

**Response No. 4:** The issuance of an enforcement order, such as Cleanup and Abatement Order No. 99-55, is exempt from the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15308 and 15321, Chapter 3, Title 14 of the California Code of Regulations. As the commenter notes, the time for making a CEQA challenge to CAO 99-55 has passed. Regardless, as noted above in Response No. 2, the approval of the WDRs does not impermissibly constitute the initiation of construction activity by the Regional Water Board.

**Comment No. 5:** The commenter suggests that the best solution is to disturb the plume of contamination as little as possible.

**Response No. 5:** The comment of disturbing the groundwater plume as little as possible would result in a delayed cleanup, or no cleanup at all. This is not an acceptable alternative to the Regional Water Board as it would constitute a violation of laws, regulations, and policy applicable to the cleanup and abatement of discharges under the California Water Code. Leaving the contamination in place without further treatment would entail relying on natural processes to remediate the hexavalent chromium and the VOCs. The natural processes to reduce the chromium and VOCs would take place over a very long period of time, and could result in further spread of the contamination and degradation of beneficial uses of waters of the state. There are many technologies available to remediate contaminated soil and groundwater at the Remco facility, one such technology is in-situ treatment using molasses. In addition to the Regional Water Board orders, the WERT is required by the Federal Court to administer the cleanup of the site.

**Comment No. 6:** Commenter suggests forming a Technical Advisory Committee (TAC) under the supervision of the Regional Water Board to oversee all future work on the Remco facility site and all other locations that may be contaminated by hazardous waste from Remco operations.

**Response No. 6:** The Regional Water Board does not object to the formation of a TAC, however, it is not appropriate for the Board to administer or provide direction to any such group. Staff would consider participating in the activities of an advisory group depending on the scope of its activities.

For clarification of the Regional Water Board's role, the Regional Water Board is currently overseeing the investigation and cleanup of the Remco facility using its independent authority. The Regional Water Board is charged with protecting waters of the state. In this role, the Regional Water Board requires responsible parties (dischargers) to cleanup and abate the impacts of contamination to waters of the state. In this role (in simple terms), the discharger submits workplans and reports recommending certain actions to investigate the extent of contamination, and plans for cleanup. Regional Water Board staff review these documents and provide comments. At certain sites, enforcement orders are issued that specify time frames for the submittal of workplans and reports or other activities. Regional Water Board staff can require certain actions and a schedule for submittal of workplans/reports in an enforcement order, but does not have the authority to specify the method and manner which the discharger chooses for compliance as long as the proposal is adequate to demonstrate that compliance will be achieved. The Regional Water Board does not take on the lead role of the discharger as suggested by the commenter.

In this instance, the discharger submitted a report of waste discharge proposing a project to treat soil and groundwater contaminated with hexavalent chromium. The Regional Water Board evaluated the proposal and has determined that the project is technically sound. Therefore, draft waste discharge requirements were prepared for consideration at a Regional Water Board meeting. The Waste Discharge Requirements specify conditions that must be met in order to conduct the cleanup in a safe and effective manner.

**Comment No. 7:** The TAC would oversee a Programmatic Environmental Impact Report (PEIR) focusing on completing the remedial investigation, and identifying interim remedial actions.

**Response No. 7:** In response to the assertion that an EIR is required, refer to Response No. 2 above. It is the role of the discharger to investigate the extent of contamination and to propose interim and long-term cleanup measures. The Regional Water Board is not the discharger responsible for the investigation, cleanup and remediation of the Remco facility. The Regional Water Board's role is defined in Response No. 6 above. In addition, the Regional Water Board staff believes that the extent of contamination has been defined to the point where corrective action alternatives can be developed and applied to cleanup soil and groundwater contamination.

**Comment No. 8:** The commenter suggests that the Regional Water Board contract with an engineering firm directly to design the necessary studies to complete the RI in order to prepare the PEIR, and provide consultation on subsequent aspects of the project.

**Response No. 8:** It is not the role of the Regional Water Board to perform an investigation and cleanup of a site. Response No. 6 above, summarizes the Regional Water Board's role.

**Comment No. 9:** Letter from the Willits Citizens for Environmental Justice (WCEJ) dated June 27, 2003, and Letter from K. Berry dated July 21, 2003 raise issues related to the excavation project: *Workplan for Remediation of Source Soil*.

**Response No. 9:** The proposal to excavate soils is not part of the action before the Regional Water Board.

**Comment No. 10:** Letter from Ed Burton, dated July 22, 2003. The commenter is concerned with potential exposure of the neighbors to contaminants.

**Response No. 10:** The proposed VOC Pilot Study and IRA is designed to avoid any exposures to nearby residents. An air monitoring and groundwater monitoring program is included in the draft waste discharge requirements to evaluate the conditions in the subsurface and air before, during, and after the completion of the projects. These monitoring programs will enable detection of any air or water constituents that could result in potential exposure to individuals. In the event that such detections occur, contingency plans are contained in the Waste Discharge Requirements to inject hydrogen peroxide to the groundwater to stop the chemical reactions in the subsurface and any subsequent migration to ambient air. This effectively precludes potential exposures to individuals. Furthermore, during the 2000 pilot study, the injection of molasses to the groundwater at the Remco facility did not result in any impacts that could have adversely impacted the health of individuals.

**Comment No. 11:** The WERT has not considered the use of long-term zero discharge phytoremediation like the Solar Powered Artificial Wetland (SPAW) system.

**Response No. 11:** Janice Goebel, Regional Water Board staff, has visited the SPAW system at the home of Mr. Burton and at the wastewater treatment plant. The SPAW system is an innovative system that utilizes Redwood trees for the treatment and uptake of sewage. However, treatability studies on the use of the SPAW system for treating contaminated groundwater containing volatile organic compounds, hexavalent chromium, and other constituents present at the Remco facility have not been conducted. Specific research is needed to determine if Redwood trees are capable of uptaking the chemicals of concern discharged at Remco; whether the trees would survive after the uptake of chemicals; and to determine if the trees would be designated as wastes.

**Comment No. 12:** Letter from P. Stutrud, dated July 25, 2003. Mr. Stutrud protests not being noticed for the Regional Water Board's public meeting held on July 24, 2003, and heard about the meeting while attending another meeting in Willits by the WERT. The commenter has signed up for the mailing list and has written comment letters to the Regional Water Board.

**Response No. 12:** The first meeting Mr. Stutrud mentions is a meeting that was held by the WERT on the excavation of contaminated soils. The WERT held the meeting prior to the Regional Water Board staff's public meeting on July 24, 2003 to discuss the VOC

pilot study and Chrome IRA. The excavation of contaminated soils is a separate issue from the waste discharge requirements scheduled for consideration by the Regional Water Board at the September 24, 2003 meeting.

Regional Water Board staff maintains a Remco interested parties mailing list containing approximately 200 names and addresses. A public meeting notice was sent to all interested parties on July 3, 2003 for the July 24, 2003 public meeting. Mr. Stutrud was at one time on the interested parties mailing list, and was removed when mail addressed to him was returned. Mr. Stutrud has again been placed on the Remco interested party mailing list and will be provided with all notices and documents circulated to parties on the list.

**Comment No. 13:** The commenter believes that under the Brown Act (or its equivalent) notice must be given 72 hours in advance of a called meeting.

**Response No. 13:** The Bagley-Keene Act applies to State agencies. The Brown Act applies to local governments. However, the Bagley-Keene Act was not triggered because it was a public meeting convened by staff and not a meeting of the Regional Water Board. No Regional Water Board Member attended the meeting nor did the Board make a decision. In addition, the public meeting was noticed 21 days before the public meeting was held.

**Comment No. 14:** Who prepared the Negative Declaration?

**Response No. 14:** Regional Water Board staff prepared the Negative Declaration. The primary author is Janice Goebel.

**Comment No. 15:** The commenter does not believe that the Regional Water Board staff adequately considered the view questions (Aesthetics, Page 12 that is contained in the Initial Study) because: (1) the site is close to Highway 101; (2) portions of the building will be removed; and (3) the project will distract drivers on Highway 101.

**Response No. 15:** The Remco facility is adjacent to Highway 101, but not within any portion of Highway 101 that has been designated as a state scenic highway. Nevertheless, the proximity of Highway 101 to the proposed projects was considered. A person will not be able to readily observe the VOC pilot study from Highway 101. The work conducted for the chromium interim remedial action will consist primarily of the injection of molasses using a small drilling rig. The drilling rig will be boring inside the Remco building, and outside of the building structure on the former Luna Market property (now owned by the WERT). The former Luna Market property is fenced with chain link fencing and wooden slats to block the view. Therefore, the project will not distract drivers on Highway 101.

The proposed injection of molasses on the former Luna Market property is not associated with the removal of any portions of the building. Removal of portions of the roof and

siding is part of the project to excavate source soils and that is a separate proposal by the WERT and not part of the Initial Study or action before the Regional Water Board.

**Comment No. 16:** The commenter does not believe the Regional Water Board considered the actual work schedule and description when evaluating the Initial Study Aesthetics section because the commenter did not see an actual work schedule and description.

**Response No. 16:** The Aesthetics Section of the Initial Study pertains to the potential for the project to create light or glare, degrade the existing visual character of the site, or adversely affect day or nighttime views. Each of these issues was evaluated when preparing the Initial Study. No impacts were noted because the project does not involve any work during night or evening hours. In addition, the proposed work involves nothing other than the drilling of holes and injection of remedial solutions which will not degrade the visual character of the site. The description of the work involved included in this project is contained in the Report of Waste Discharge.

**Comment No. 17:** The commenter references discussions of airborne dust and contamination. The commenter suggests that the project will obstruct implementation of the air quality plan and violate air quality standards or contribute substantially to an existing or projected air quality violation.

**Response No. 17:** The discussions referenced by the commenter took place at a public meeting related to the excavation of source soils. The excavation of source soils is not part of the action before the Regional Water Board. However, air quality impacts were considered during preparation of the Initial Study/Negative Declaration. It was concluded that the minor amounts of dust that could be generated during drilling operations could easily be controlled using a hose with a nozzle. These activities will not conflict or obstruct the implementation of the Mendocino County's draft Air Quality Management Plan.

**Comment No. 18:** The commenter relates work experience where procedures were in place to handle and store extremely hazardous substances; designation of areas where special health and safety gear was mandated; decontamination areas for workers, etc. The commenter asks if this project includes such preparations and cautions.

**Response No. 18:** The former Remco facility is a site where health and safety issues must be addressed by law and regulation. A health and safety plan for the Remco facility is in place. The commenter, however, may be referring to the soil excavation project where specific work zones, and personnel protective clothing has been specified for that action. The health and safety plan for the excavation contains the details of the various work zones and required personal protective clothing and gear. The excavation is separate from this action to adopt waste discharge requirements. The *Work Plan for Excavation of Source Soils* and the Health and Safety Plan is available in our office for review.



**Comment No. 19:** The project to inject molasses has the potential to cause odors, and generate hydrogen sulfide gas and vinyl chloride (byproducts of volatile organic compounds). The commenter relates experience of hydrogen sulfide gas dangers at oil refineries/fields.

**Response No. 19:** The potential for hydrogen sulfide gas and vinyl chloride to be produced as a result of the project was evaluated by Regional Water Board staff. It was concluded that hydrogen sulfide gas could be formed at low levels in the subsurface but that the potential for migration to the ambient air at unsafe levels is very remote. It is acknowledged that vinyl chloride will be formed during the dechlorination of solvents present in the groundwater. However, the vinyl chloride will be present for a limited duration before degrading to non-toxic end products, and the vinyl chloride will not migrate from the treatment zone beneath the Remco facility.

In 2000, a pilot study to reduce hexavalent chromium to trivalent chromium was conducted using two different reducing agents, calcium polysulfide and molasses. An air monitoring program was incorporated into the waste discharge requirements adopted by the Regional Water Board for that project. The program was implemented to evaluate hydrogen sulfide levels in ambient air. The air monitoring program did not detect hydrogen sulfide levels in ambient air at unsafe levels, and no health related impacts were documented.

The consultants for the Willits Environmental Remediation Trust, consultants for the City of Willits, and other consultants were contacted by Regional Water Board staff to obtain further information on the potential to generate hydrogen sulfide from the injection of molasses. Technical consultants concur in the assessment that hydrogen sulfide production is not a significant concern associated with the activities proposed within the scope of the projects.

Regional Water Board staff also contacted staff from the Superfund Section of the U.S. Environmental Protection Agency to inquire whether U.S. EPA has any experience or information on the potential to generate hydrogen sulfide when creating a reducing environment. U.S. EPA staff requested information from the National Risk Management Research Laboratory, Ground Water and Ecosystem Restoration Division of U.S. EPA located in Ada, Oklahoma. U.S. EPA reported there were no sulfide emissions associated with two sites where the U.S. EPA intentionally promoted sulfide production as a means of removing metals from groundwater. At two other sites, no sulfide odors were noted. U.S. EPA recommended including sampling and analyzing for pH, iron, and sulfide in a groundwater monitoring program. These parameters are included in the Regional Water Board's proposed monitoring program.

Staff also contacted other Regional Water Board offices to inquire on the potential for generation of hydrogen sulfide at sites where the injection of molasses has been proposed. Molasses or other food grade substances were used to reduce hexavalent chromium to trivalent chromium and VOCs at the following sites:

- Boeing Realty, Los Angeles, where two full scale cleanups are being implemented. One is to reduce hexavalent chromium and dechlorinate volatile organic compounds using calcium polysulfide and corn syrup to groundwater. Boeing is proposing to inject up to 2.9 million gallons of a solution of calcium polysulfide, corn syrup and water to remediate shallow groundwater. The potential for generating hydrogen sulfide gas has been determined to be insignificant and is not an issue with the staff of the Los Angeles Regional Water Board or the public.
- A second study by Boeing Realty (also in the Los Angeles area) is to inject a solution of molasses and water into shallow groundwater. Boeing is proposing to inject up to 6.5 million gallons of molasses and water to reduce VOCs to groundwater. The potential for generating hydrogen sulfide gas is not an issue with the Los Angeles Regional Water Board or the public. The Boeing Realty Site is in close proximity to residential homes.
- Dae Systems, San Marcos, California is using molasses to reduce hexavalent chromium and dechlorinate VOCs. The potential production of hydrogen sulfide gas is not an issue with the San Diego Regional Water Board or the public.
- Electric Coatings in Emeryville, California used molasses to treat groundwater contaminated with hexavalent chromium and VOCs. The treatment was so effective that the staff of the San Francisco Bay Regional Water Board indicate they are preparing to close the site. No monitoring for hydrogen sulfide was required as the production of hydrogen sulfide was not considered to be a problem. No odors were noticed during the execution of the project nor were adverse health exposures reported.
- In addition, staff learned that a Superfund site, Avco-Lycoming in Williamsport, Pennsylvania, is proposing a full-scale treatment of hexavalent chromium using molasses. A pilot study was conducted in 1996/1997 with good results. The Superfund site is in close proximity to a residential neighborhood. No air monitoring was required nor were concerns associated with the potential generation of hydrogen sulfide an issue with the U.S. EPA or the public.

The formation of hydrogen sulfide in the subsurface is possible, but the migration of hydrogen sulfide gas to ambient air at levels that present health exposures is considered very remote. However, the draft waste discharge requirements contain an air monitoring program and a groundwater monitoring program as well as a contingency plan if hydrogen sulfide, vinyl chloride, or any other constituent is detected at unsafe levels. Regional Water Board staff understands the difficulties and dangers with hydrogen sulfide in the oil fields/refineries. The concerns associated with hydrogen sulfide emissions at oil fields/refineries and the proposed project are not comparable.

**Comment No. 20:** The commenter believes the Regional Water Board staff needs to take the project more seriously and prepare an environmental impact report.

**Response No. 20:** See Response No. 2 above for the discussion of CEQA compliance. Because the project will not result in a significant impact, a Negative Declaration is the appropriate CEQA document. However, because of community concerns, Regional

Water Board staff has required the implementation of a comprehensive groundwater and air-monitoring program.

**Comment No. 21:** The commenter asks if there is any compassion or understanding for the people of Willits and relays information on poor health of individuals in the community.

**Response No. 21:** The Regional Water Board is concerned about the public health and safety of the community of Willits. Staff interaction with, and responsiveness to, members of the community is documented in the record.

**Comment No. 22:** The public meeting held on July 24, 2003 should be held again and noticed properly.

**Response No. 22:** The public meeting held by the staff of the Regional Water Board was noticed properly. The public meeting notice was mailed on July 3, 2003 for the public meeting on July 24, 2003 providing 21 days of notice to the community.

**Comment No. 23:** WCEJ letter dated July 25, 2003. The commenter states that California Department of Health Services (CDHS) and Agency for Toxic Substances and Disease Registry (ATSDR) concluded that releases of airborne hexavalent chromium posed a public health hazard in the past (1964-1995), and there is an indeterminate health hazard both currently and in the future from exposure to hexavalent chromium and lead in dust that may be generated during site/building remediation or demolition activities. Therefore, CDHS and ATSDR have concluded that there is adverse impact proposed by this Negative Declaration.

**Response No. 23:** This statement is incorrect. The recommendation on Page 43 of the Public Health Assessment Report prepared by the Environmental Health Investigations Branch of the California Department of Health Services states:

“3. CDHS/ATSDR recommends that the Willits Trust implement adequate measures to mitigate resuspension of hexavalent chromium-contaminated dusts or soil that could be generated during remedial activities at the site. This should be conducted in conjunction with air monitoring, using detection limits adequate to protect public health.”

CDHS/ATSDR do not mention the hexavalent chromium interim remedial action or the Negative Declaration in the Public Health Assessment Report. In addition, adequate measures will be taken to prevent dust during the injection of molasses. The drilling process to inject molasses will generate very little dust. However, a hose with a nozzle will be used to prevent any dust generated as part of the drilling process.

**Comment No. 24:** The commenter demands the Regional Water Board revoke the proposed Negative Declaration and issue an Environmental Impact Report. It is

suggested the Regional Water Board is not complying with CEQA by preparing a Negative Declaration for the project.

**Response No. 24:** Please refer to Response No. 2. The Initial Study was prepared by staff of the Regional Water Board to determine what type of CEQA document is appropriate for the hexavalent chromium interim remedial action. Each item of the Initial Study was carefully considered and evaluated. CEQA allows for a lead public agency to prepare a negative declaration when no significant impacts from a project are identified. Staff's review of the project did not reveal significant impacts and a Negative Declaration was prepared. The preparation of the Initial Study/Negative Declaration complies with the California Environmental Quality Act.

**Comment No. 25:** Letter from Ed Burton dated August 12, 2003. The commenter has revised the proposed Waste Discharge Requirements Order No. R1-2003-085 and added language for the Solar Powered Artificial Wetland (SPAW) system in lieu of the proposed in-situ treatment using molasses.

**Response No. 25:** Regional Water Board staff does not have the authority to impose an alternative action in lieu of the proposal advanced by the WERT, or to require specific cleanup actions to achieve compliance with cleanup orders. Please refer to Response No. 6 and 11 above.

**Comment No. 26:** Several comments received at the July 24, 2003 public meeting concerned the potential for creating byproducts. The potential for creating byproducts generally fall into three areas of concern. The first is the possible formation of hydrogen sulfide in ambient air. The second is the formation of interim organic compounds as the solvents are broken down into benign end products such as carbon dioxide, chloride and water. The third is the production of the byproducts acetone and Methyl Ethyl Ketone (MEK).

**Response No. 26:** Hydrogen Sulfide. Response No. 19 above addresses the concerns associated with hydrogen sulfide.

Formation of Interim Organic Compounds. Interim byproducts will be formed as the microbial degradation of solvents occurs. However, over time, these byproducts will be further metabolized by the same microbial populations until the solvents are eventually reduced to benign end products such as carbon dioxide, chloride and water. Some of the interim byproducts such as vinyl chloride have lower drinking water standards than the parent compound, PCE. The steps in the chemical breakdown of solvents are necessary and unavoidable. They will happen naturally over a long period of time (these byproducts are already present at Remco) or they can happen more rapidly when using the enhanced bioremediation technology being proposed in this project. However, all these reactions are to take place in the Remco plume of contaminated groundwater. There should be no exposure to any person as a result of adding molasses to the groundwater.

Byproducts Acetone and Methyl Ethyl Ketone (MEK). The potential for the production of the chemicals acetone and (MEK) was brought up at the Regional Water Board's public meeting held on July 24, 2003. Acetone and MEK were produced in the pilot study. The WERT has determined that the cause of the detection of acetone and MEK can be attributed to different sources.

- A fermentation reaction occurs as the molasses is being utilized as a source of carbon and energy by the subsurface microbial population.
- Common soil bacteria are capable of forming intermediate products such as acetone as a result of glucose fermentation.
- MEK can be formed in the presence of hexavalent chromium or other types of oxidizers in the presence of acetone.
- MEK and acetone present in the soil may be released or desorbed by the injection fluid.

The groundwater monitoring results within the pilot study revealed temporary increases in MEK and acetone, while the monitoring of wells outside the pilot study area did not show any increases. The conclusion is that the compounds MEK and acetone did not migrate outside of the pilot study area. It is also known that MEK or acetone and other interim byproducts will be further metabolized by the same microbial populations that created them until the end products are reached (carbon dioxide, chloride and water). In general, the current concentrations of MEK and acetone in the pilot study area are below laboratory detection limits.

(RemcoR1final)